



PATENT
Docket No. 1082-372

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AS

Considered.
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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:

SANDERSON et al.

Entitled: "SYNTHESIS OF ENERGETIC
THERMOPLASTIC ELASTOMERS
CONTAINING OLIGOMERIC
URETHANE LINKAGES"

Serial No. 09/436,440

Filed: November 9, 1999

Group Art Unit: 1711

Examiner: Sergeant, R.

Assistant Commissioner
for Patents
U.S. Patent and Trademark Office
Washington, D.C. 20231

TC 1700, AIL ROOM

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November 12, 2002
[November 11, 2002 = Holiday]
[November 10, 2002 = Sunday]

REPLY BRIEF

Dear Sir:

In response to the Examiner's Answer dated September 10, 2002,
Applicants submit herewith this Reply Brief in triplicate as required by 37
C.F.R. §§ 1.192 and 1.193.

Please charge any fee due in connection with this Reply Brief to
Deposit Account No. 01-0481. If additional fees are due in connection with

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this application, please charge Deposit Account No. 01-0481, and accept this paper as a petition for extension, if necessary.

Applicants incorporate the remarks and arguments presented in the Brief on Appeal and Supplemental Brief on Appeal, as if they have been reproduced herein. Applicants add the following remarks and arguments.

(2) *RELATED APPEALS AND INTERFERENCES*

Applicants submitted a Supplemental Brief on Appeal on September 3, 2002. The Supplemental Brief on Appeal apparently crossed in the mail with the Examiner's Answer.

As set forth in the Supplemental Brief on Appeal, there is a related appeal which may directly affect or may be directly affected by or have a bearing on the Board's decision in the pending appeal. The related appeal is in U.S. patent application no. 09/436,360. Although the applications neither share a common priority claim nor claim a benefit or priority of each other, the applications do involve similar subject matter and the resolution of related issues on appeal.

The related appeal of U.S. patent application no. 09/436,360 was effected on September 3, 2002 by the filing of a Brief on Appeal in that application. Applicants acted diligently in bringing the related appeal to the

attention of the Board of Appeals because, *inter alia*, the Supplemental Brief on Appeal was filed on the same date that the related appeal was effected.

(8) **ARGUMENTS**

(a) ***A Person of Ordinary Skill in the Art Would Not Have Considered Claims 1-11 Indefinite under 35 U.S.C. § 112, Second Paragraph***

Claims 1-11 stand rejected under 35 U.S.C. § 112, second paragraph, as indefinite on the following ground:

It is unclear if the A block containing segment and the B block containing segment are mutually exclusive, since both segments may be crystalline below -20°C and amorphous above 60°C. Despite appellant's argument, at temperatures beyond the recited extremes, the requirements of each segment can be satisfied by a single segment. Also, there is no requirement that the claim is operable only within the endpoints of the two temperature extremes. Further, despite appellants' arguments, the examiner's interpretation is reasonable in view of the claim language.

Claims must be interpreted as they would be by one of ordinary skill in the art. Persons of ordinary skill in the art would have understood that blocks of the type described in the application have a transition point below which the blocks are crystalline and above which the blocks are amorphous. Any other construction would not be reasonable.

The Examiner states that "both segments may be crystalline below [about] -20°C and amorphous above [about] 60°C." This is true. But the fact

that the A and B blocks may share some common properties does not render them identical or, as the Examiner characterizes, not “mutually exclusive.” The A and B blocks possess different properties between about -20°C and about 60°C. The A block is crystalline below about 60°C (*e.g.*, is crystalline between about -20°C and about 60°C), whereas the B block is amorphous above about -20°C (*e.g.*, is amorphous between about -20°C and about 60°C). Thus, the A and B blocks are in different states between about -20°C and about 60°C and, therefore, are mutually exclusive.

The Examiner further states that “the requirements of each segment can be satisfied by a single segment.” Applicants disagree. As explained above, the A and B blocks possess different properties between about -20°C and about 60°C. It is not possible for a “segment” to meet the A block’s recitation of being crystalline at temperatures below about 60°C **and** to simultaneously meet the B block’s recitation of being amorphous at temperatures above about -20°C.

The Examiner still further states that “there is no requirement that the claim is operable only within the endpoints of the two temperature extremes.” Applicants do not understand the basis or rationale for this statement. Applicants have not attempted to import an unclaimed limitation from the

specification into the claims. The claims clearly and unambiguously recite temperature ranges.

Finally, the Examiner has stated that “the examiner’s interpretation is reasonable in view of the claim language.” However, the Examiner has not offered any evidence or rationale to support this statement. Nor has the Examiner addressed or refuted Applicants’ reasonable interpretation of the claims.

It is respectfully submitted that all claims are in full compliance with 35 U.S.C. § 112, and that the Section 112 rejection should be reversed.

(b) The Examiner Has Improperly Relied Upon The Specification of Co-Pending Application 09/436,360 In Fashioning the Obviousness-Type Double Patenting Rejection

The claims of the ‘360 application are silent with respect to the claimed “difunctional oligomer.” The term “oligomer” recited in the claims of this application is known in the art and described in the specification as a molecule containing a plurality of monomer units.

The claims of co-pending application 09/436,360 recite a difunctional compound, but give no reasonable suggestion or teaching that the difunctional compound is any thing other than a simple diol (e.g., butanediol). Given the lack of teaching of using an oligomer for the linking compound, the

requisite motivation is missing, and it would not have been obvious to one of ordinary skill in the art to select a difunctional oligomer as the linking compound.

The Examiner's Answer acknowledges that the claims of co-pending application 09/436,360 discloses "linking compounds," but not specifically "oligomers." The Examiner attempts to overcome this deficiency by looking to the specification of co-pending application 09/436,360:

The copending application clearly includes oligomers, urethane oligomers derived from appellants' claimed reactants (instant claims 5, 6, 33, 37, 38, and 41), within the definition of possible linking compounds. See pages 15 and 16 of the copending application (the copending specification has been relied upon solely to determine the scope of compounds encompassed by the claimed "linking compound").

Examiner's Answer, pages 4-5.

The Examiner's reliance on the specification of the co-pending application is improper. Applicants point to the following dispositive excerpts from Section 804 of the MPEP:

[A] double patenting rejection must rely on a comparison with the claims in an issued or to be issued patent, whereas an obviousness rejection based on the same patent under 35 U.S.C. 102(e)/103(a) relies on a comparison with what is disclosed (whether or not claimed) in the same issued or to be issued patent.

* * *

[I]n *In re Kaplan*, 789 F.2d 1574, 229 USPQ 678 (Fed. Cir. 1986)[,] Kaplan had been issued a patent on a process of making chemicals in the presence of an organic solvent. Among the organic solvents disclosed and claimed as being useful were tetraglyme and sulfolane. One unclaimed example in the patent was specifically directed to a mixture of these two solvents. The claims in the application to Kaplan and Walker, the application before the Office, were directed to essentially the same chemical process, but requiring the use of the solvent mixture of tetraglyme and sulfolane. In reversing the double patenting rejection, the court stated that the mere fact that the *broad* process claim of the patent requiring an organic solvent reads on or “dominates” the *narrower* claim directed to basically the same process using a specific solvent mixture does not, *per se*, justify a double patenting rejection. *The court also pointed out that the double patenting rejection improperly used the disclosure of the joint invention (solvent mixture) in the Kaplan patent specification as though it were prior art.*

(Emphasis added.)

The court’s statement in *In re Kaplan* holds equally here: “the double patenting rejection [of claims 1-11 and 33-41] improperly use[s] the disclosure of the [urethane oligomers] in the [copending 09/436,360] patent specification as though it was prior art.” The Examiner errs in arguing the claimed subject matter of copending application 09/436,360, then relying upon the specification’s disclosure of the ‘360 application.

For these reasons, reversal of this rejection is in order.

(c) *The Examiner Has Not Established a Prima Facie Case of Obvious Against Claims 1-4, 7-11, 34-36, 39, and 40 Under 35 U.S.C. § 103(a)*

Claims 1-4, 7-11, 34-36, 39, and 40 stand rejected under 35 U.S.C.

§ 103(a) as obvious over U.S. Patent No. 4,806,613 to Wardle in view of Oertel, *Polyurethane Handbook: Chemistry - Raw Materials - Processing - Applications - Properties*. This rejection is traversed.

In the Examiner's Answer, the Examiner makes the following statement in support of the Section 103(a) rejection.

Patentee [of the Wardle '613 patent] is silent regarding the use of an oligomer as the linking compound; however, patentee does disclose that there is no limitation on the size of the linking compound. *In the absence of a size requirement, the position is taken that one would have been motivated to utilize any size linking compound, including an oligomeric compound, so as to arrive at the instant invention.*

(Emphasis added.)

Applicants respectfully submit that the Examiner has not fairly represented the teachings of the Wardle '613 patent. Column 9, lines 1-7 of the Wardle '613 patent state that "[t]ypically, the linking compound will be short, straight carbon chain having terminal hydroxyl groups, e.g., 1,4-butanediol, ethylene glycol, and 1,6 hexanediol. . . . [I]t is generally preferred

that the linking compound be of relatively low molecular weight so as to minimally influence the characteristics of the block polymer.”

The mere fact that references can be combined/modified in the manner suggested by the Examiner does not render the resultant combination/-modification obvious unless the prior art also suggests the desirability of the combination/modification. MPEP § 2143.01. Here, the Wardle ‘613 patent suggests that it is desirable to use short, relatively low molecular weight linking compounds. Although the Wardle ‘613 patent allegedly does not place a limitation on the size of the linking compound, the Wardle ‘613 patent also does not provide any motivation for using an oligomeric compound. Instead, the Wardle ‘613 patent places preference on the use of monomeric linking compounds.

For these additional reasons, reversal of the Section 103(a) rejection is respectfully requested.

(9) CONCLUSION

For all the above-discussed reasons and submitted in the Brief on Appeal, it is clear that the inventions recited in Applicants’ claims are patentable over the art of record. Accordingly, reversal of the remaining rejection and allowance of claims 1-11 and 33-41 are respectfully requested.

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Respectfully submitted,
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I hereby certify that this Reply Brief, in triplicate, is being deposited with the United States Postal Service on November 12, 2002 with sufficient postage as first class mail in an envelope addressed the Assistant Commissioner for Patents, U.S. Patent & Trademark Office, Washington, D.C. 20231.

